sensing and remote assessment of aircraft technicians and their surrounding environments, offering improved safety and performance with significant reductions in required manpower.

Much of the information needed to operate globally is found in foreign language speech, text, videos, and images. This is especially problematic for less-spoken languages. To address this, the Human Language Technology team conducts research and development on automatic speech recognition, machine translation, optical character recognition, natural language processing, information extraction, information retrieval, and text-to-speech synthesis.

Delivering Solutions

The Wing delivers solutions through its four consult services which handle tens of thousands of requests each year. These include, the Operational Consult Service, the Aerospace Medical Consult Service, the Epidemiology Consult Service, and the Environmental Safety & Occupational Health Consult Service. The Wing's various laboratories operate 24/7 to process more than 1.4 million lab samples from across the DoD. The Wing's epidemiology lab works closely with the CDC to develop the flu vaccine each year.

Experts in the Operational Based Vision Assessment (OBVA) Laboratory study aircrew vision requirements and standards. The OBVA Lab is researching the F-35 Helmet Mounted Display System, the most advanced system in the world, providing synthetic see-through-the-aircraft day and night vision. Lastly, they are researching the human vision requirements and best industry practices for a 3D remote vision system in support of the new KC-46 tanker, which places the boom operator in the cockpit using augmented reality to refuel aircraft.

Responsiveness

The Wing responds rapidly and effectively to the real-world needs of our military, partnering with industry and academia where possible. Many Wing experts have strong relationships with Airmen, who directly provide insight and needs. Examples include shrinking the size and weight of equipment, lightening the load on special operators, and using advanced technology to alert instructors of student biometrics during water training. More recently, the Wing's responded to the COVID-19 pandemic by testing potential COVID-19 samples from military members and their beneficiaries, sent from military treatment facilities around the world. Further, Wing experts reconfigured this technology so that it could be used by both military and civilian hospitals, enabling medical personnel to remotely monitor patients infected with COVID-19, helping to protect medical professionals and lessening the amount of personal protective equipment (PPE) needed.

Future Directions

Wing experts are investigating how to network the Airman's decision making with Artificial Intelligence, data analytics, and automation in order to fuse the Airman and the machine. In the area of Systems Biology, Wing experts are investigating the complexity of biological systems to discover, enhance, and protect the underlying mechanisms contributing to the physical and cognitive state of our Airmen. Through basic research and the unique partnerships and in-house expertise to bridge the gap between research and application, the Wing is poised to impact our Airmen in the future.

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Fellows Class of 2020

The following AsMA members have achieved Fellows status and were approved by the Executive Committee:

Douglas Boyd	Kris Lehnhardt
Natacha Chough	Dag Lemming
Rowena Christiansen	Amanda Lippert
Ilaria Cinelli	Kate Manderson
Swee Weng Fan	James McEachen
Franz Hauer	Lindsey McIntire
Roger Hesselbrock	Mark McPherson
Stephen Houston	Felix Porras
Jeffery Hovis	Roland Quast
Kenneth Ingham	Carol Ramsey
Mahmet Karakucuk	Brian Self
Jennifer Law	Jayashri Sharma